process illustrated in **Figure 21** may be implemented in a data cache <u>unit</u>, such as data cache <u>unit</u> **216** and instruction cache <u>unit</u> **214** in **Figure 2**.

At page 46, paragraph 1:

With reference next to **Figure 22**, a diagram illustrating components used in accessing information collected with respect to the execution of instructions or the access of memory locations in accordance with a preferred embodiment of the present invention. In this example, instruction unit **2200** executes instruction **2202** and increments counter **2204**. This counter is incremented each time instruction **2202** is executed. In this example, instruction unit **2200** may be implemented as instruction cache <u>unit</u> **214** in **Figure 2**.

At page 46, last paragraph:

When the instruction or data cache <u>unit</u> pages are loaded into memory, the operating system program loader/linker and/or the performance monitoring program, reads the meta data generated by the compiler and determines that counting is associated with instruction or data access, then the loading process allocates data areas to maintain the counters as part of its perfinst segment. The size of the counters and the granularity of the data access determine the amount of work area to be allocated.

At page 62, last paragraph:

Data accesses may be monitored in a similar fashion. For example, data **3112** includes data range **3114**. Data accesses to data range **3114** may be counted in a similar fashion to execution of instructions within instruction range **3102** or instruction range **3104**. These ranges may be defined in registers within a data unit, such as data cache <u>unit</u> **216** in **Figure 2**. These ranges for data may be defined in the register as a range of memory locations for the data.

At page 48, paragraph 1: *47 LAST*

Data unit **2206** may be implemented as data cache <u>unit</u> ~~206~~ **216** in **Figure 2**. In this example, each time data **2208** is accessed, counter **2210** is incremented. Data **2208** and counter **2210** are both located in a particular memory location. In these examples, a new instruction may be